

Elk Brucellosis Project—April Update

We have continued to monitor the collared elk throughout April and into May. So far we have had three mortalities: one in February, one in March and a recent mortality in early April (Table 1). The most recent mortality was a seropositive pregnant elk (animal #5) The remaining collared, seropositive and pregnant elk were located 6 times each during the month of April. One abortion event occurred on 4/23 and samples were collected from the site. The seven remaining Vaginal Implant Transmitters (VITs) are all currently transmitting on "Live" mode.

Thirty-four of the 35 radio collared elk were located from the air on 4/24/12 (Figure 1). One seronegative elk has been missing since capture, and we were again unable to locate her. During the flight one elk mortality (#5) was discovered east of the Ruby river, and one expelled VIT was located near Antelope Peak. Both the mortality and VIT were retrieved the following day 4/25/12. All other seropositive, collared elk were located and the VITs were transmitting on "live" mode.

The VIT (animal #17) was retrieved within 48 hours of the time it was expelled and a fetus was located at the site. The fetus, the VIT, and soil and vegetation samples were collected. We were unable to locate any remaining placenta or other birthing material at the site. The collected samples will be cultured in an attempt to grow the *Brucella* bacteria, which will help us determine if the abortion was the result of *Brucella* and if shedding of the bacteria occurred. Prior to leaving the abortion site, we attempted to disinfect the location where the fetus was found and no cattle were observed in the area.

The mortality (animal #5) had been on the ground for several days due to difficulty locating the elk during earlier flights. Following a field necropsy, the mortality was deemed a probable mountain lion kill. The remaining fetus parts and samples of the soil and vegetation were returned to the Wildlife Lab for processing. Samples collected from the mortality and abortion site were submitted to the Montana Department of Livestock Diagnostic Lab for culture. Results are pending but will be included with the next report.

Ground tracking of the collared elk with VITs will increase through the months of May and June as elk calving season begins.

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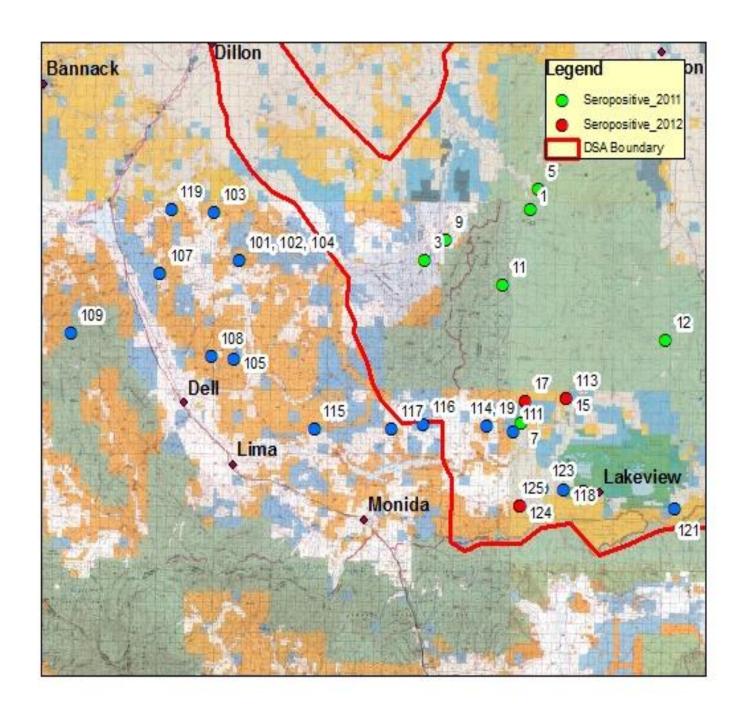


Figure 1. All collared elk located during the 4/24/12 monitoring flight. Seropositive elk captured in 2012 are shown in red and seropositive elk captured in 2011 are shown in green. Seronegative elk, all captured in 2012, are shown in blue.

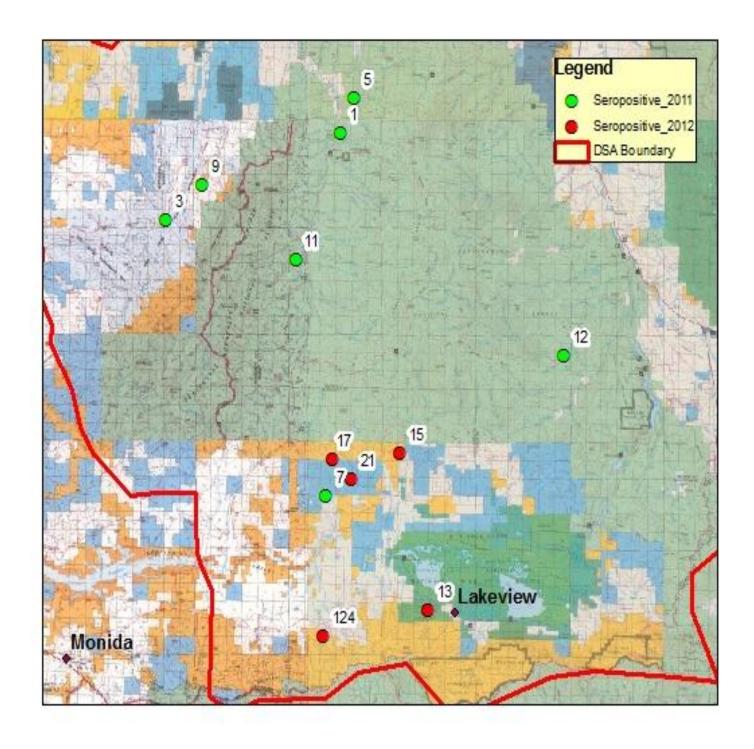


Figure 2. All seropositive elk collared during 2011 in the Ruby/Blacktail area are shown in green, and seropositive elk captured in the Sage Cr/Little Basin Cr area are shown in red. Animal number 5 is a mortality and the collar and VIT have been retrieved. Animal number 17 has expelled her VIT, which has been retrieved. Animals 124, 11 and 12 were not pregnant at capture and do not have VITs.

Table 1. Thirty elk were captured and collared in 2012, and an additional 7 brucellosis seropositive elk from year 1 of this study were also recaptured and collared.

ID#	Capture Area	First capture year	Serostatus	Pregnancy status	Most recent location
1	Ruby	2011	Positive	Pregnant	Lazyman Cr/Ruby River
3	Ruby	2011	Positive	Pregnant	Robb Creek
5	Ruby	2011	Positive	Pregnant	Mortality Martin Cr/Ruby River
7	Ruby	2011	Positive	Pregnant	Brundage Creek
9	Ruby	2011	Positive	Pregnant	Ledford Creek
11	Ruby	2011	Positive	Open	Beaver Cr/ Ruby River
12	Ruby	2011	Positive	Open	W Fork Madison River
13	Little Basin Cr/ Sage	2012	Positive	Pregnant	South Centennial Valley
15	Little Basin Cr/ Sage	2012	Positive	Pregnant	Patchtop Mountain
17	Little Basin Cr/ Sage	2012	Positive	Pregnant	Fish Creek
19	Little Basin Cr/ Sage	2012	Negative	Pregnant	Antelope Peak
21	Little Basin Cr/ Sage	2012	Positive	Pregnant	Fish Creek
101	Clark Canyon	2012	Negative	Pregnant	Pistol Creek
102	Clark Canyon	2012	Negative	Pregnant	Pistol Creek
103	Clark Canyon	2012	Negative	Pregnant	Sheep Cr/Blacktail Mtns
104	Clark Canyon	2012	Negative	Pregnant	Pistol Creek
105	Kidd Exit	2012	Negative	Pregnant	Big Spring Gulch
106	Kidd Exit	2012	Negative	Pregnant	Mortality 2/24/12 Clark Canyon
107	Kidd Exit	2012	Negative	Pregnant	Red Rock Exit
108	Red Rock Exit	2012	Negative	Pregnant	Little Ashbough Canyon
109	Red Rock Exit	2012	Negative	Pregnant	Rock Canyon/Tendoys
110	Red Rock Exit	2012	Negative	Pregnant	Missing
111	Little Basin Cr/ Sage	2012	Negative	Pregnant	Brundage Creek
112	Little Basin Cr/ Sage	2012	Negative	Pregnant	Mortality 3/27/12 Lima Reser.
113	Little Basin Cr/ Sage	2012	Negative	Pregnant	Patchtop Mountain
114	Little Basin Cr/ Sage	2012	Negative	Pregnant	Antelope Peak
115	Little Basin Cr/ Sage	2012	Negative	Pregnant	Lima Reservoir Road
116	Little Basin Cr/ Sage	2012	Negative	Pregnant	Clover Creek
117	Little Basin Cr/ Sage	2012	Negative	Pregnant	Clover Creek
118	Little Basin Cr/ Sage	2012	Negative	Pregnant	South Centennial Valley
119	Little Basin Cr/ Sage	2012	Negative	Pregnant	Clark Canyon
120	Little Basin Cr/ Sage	2012	Negative	Pregnant	Fish Creek
121	Little Basin Cr/ Sage	2012	Negative	Pregnant	S Cenn Valley/East side
122	Little Basin Cr/ Sage	2012	Negative	Pregnant	Fish Creek
123	Little Basin Cr/ Sage	2012	Negative	Pregnant	South Centennial Valley
124	Little Basin Cr/ Sage	2012	Positive	Open	South Centennial Valley
125	Little Basin Cr/ Sage	2012	Negative	Pregnant	South Centennial Valley